

Date: Tuesday, 09/09/2008 2:15:19 PM
User: Julie Lecocq

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: MID TUBE ASSEMBLY
Job Number	: 41748		
Estimate Number	: 10469		
P.O. Number	:	Part Number	: D3391023
This Issue	: 09/09/2008 S.O. No. :	Drawing Number	: D3391 REV G
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: / / Type : SKIDTUBES	Drawing Revision	: G
Previous Run	: 41747	Material	:
Written By	:	Due Date	: 20/09/2008 Qty: 1 Um: Each
Checked & Approved By	: <u>JUL 08.9.09</u>		
Comment	Est. A 05.10.20 New Issue KJ/EC Est. B 06.02.10 ECN773 dwg rev.D EC est C 07.03.20 rev F dwg EC est D 07.03.28 re-format EC est E 07.10.31 ecn 1053P EC Est Rev:F ECN 1056 07-11-13 DD verified by: EC Est Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D25001100	Skidtube Extrusion
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Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)
SKIDTUBE EXTRUSION

Pick:

Qty	Part Number	Description	Batch
1	D2500-1-100	Extrusion	B32065

DP 8-9-10

2.0	D3391021	Fwd Tube Assembly
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Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Fwd Tube Assembly

Batch: B41841

DP 8-9-22

3.0	SKIDTUBES 1	SKIDTUBESS RESOURCE 1
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Comment: LANDING GEAR RESOURCE 1

1-Cut tube to finish length as per Dwg D3391

2-Identify as D3391-023

3-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391

4-Open saddles and GHW holes to Ø0.375" except for fwd saddle hole of detail "J"

DP 8-9-10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Drawing Name: MID TUBE ASSEMBLY

Job Number: 41748

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description :

5-Remove .030" from Fwd indexing Ridge as per Dwg D3391

6-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391

7-Deburr

8-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.250" holes with paint marker,

9-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.250" (14 holes) as per Dwg D3391 and 2 holes in section Detail "J", do not open wearplate holes of section "J"

10-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.297" (20 holes) as per Dwg D3391

11-Open .375" holes to .438" ***do not open fwd saddle holes***

12-Locate D3391-021 in D3391-023 at 9.00" (see view z-z)

13- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149 locating from previously drill .188" dia hole, using t-pins and clicos to ensure perfect allingment, open up previously tranfer drilled pilot holes in D3391-023/-021 to 0.438" dia. in D3391-021

14- Transfer drill 2 wearplate holes into D3391-021 using DT8217, locating from two previously drilled holes, drill remaining wearplate holes into D3391-021.

15- Locating from two fwd wearplate holes drilol remaining 6 wearplte holes in D3391-021 using DT8937

16- Open 2 fwd wearplate holes in D3391-023 to .250" dia.

17- Open 12 wearplate holes in D3391-021 to 0.297" dia.

18-Deburr and blow out all chips from inside tube

4.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

5.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

JP 8-9-22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Drawing Name: MID TUBE ASSEMBLY

Job Number: 41748

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

0 117-9-22

7.0

D33891

Web



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEB

Pick:

Qty

Part Number

Description

Batch

1

D3389-1

Web

B41833

A/R

Sikaflex-241/-291

M107301

Sikaflex expire date:

8-12-1

Start: 8-9-22 Time: 4:30

Finish: 8/9/03 Time: 7:20am

117-9-22

8.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open float bag holes as per dwg

2-C'sink float bag holes as per dwg

3- Prepare tube for welding

4-Bond web in place as per Dwg D3391 & QSI 015.

Adhere for 12 hours)

117-9-22

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

8-08/09/03

10.0

D36811

Spacer



Comment: Qty.: 5.0000 Each(s)/Unit Total : 5.0000 Each(s)

SPACER

batch:

B41248

DE 08/07/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Drawing Name: MID TUBE ASSEMBLY

Job Number: 41748

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Weld crossbolt spacer as per dwg D3391 & QSI 004

ZE 08/09/23 A/K M108708

12.0

QC10

VISUAL INSPECTION OF GROUND WELDS



Comment: VISUAL INSPECTION OF GROUND WELDS

S 08/09/24 @

13.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/09/24 @

14.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

*3:20
3:20
3:30*

M-1 08/09/24

(1X)

15.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

FD 08/09/25 ①

16.0

D35911

Bushing



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Bushing

B41140 DP8-9-25

17.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: SKIDTUBESS RESOURCE 1

1- insert D3391-021 into D3391-23

2- insert T-pins into first and third fwd saddle holes

3- ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to 0.500" as per DSI 9364

4- remove T-pins and locate DT9415 from first and third crossbolt hole using T-pins and clekos

5- ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499". Remove DT9415

DP 8-9-25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Drawing Name: MID TUBE ASSEMBLY

Job Number: 41748

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description:

6- deburr, re-alodine and blow out chips

7- press fit D3591-1 spacers using DT9416 starting from 0.500" side

1 DP 8-9-25

18.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

6 08/09/25

19.0

ALS41032130

Insert



Comment: Qty.: 22.0000 Each(s)/Unit Total: 22.0000 Each(s)

INSERT

batch:

M105819

or equivalent

per QSI 017

P10

20.0

ALS41032225

Insert



Comment: Qty.: 10.0000 Each(s)/Unit Total: 10.0000 Each(s)

INSERT

batch:

or equivalent

per QSI 017

P10

21.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Install Inserts as per Dwg

FD 08/09/25

1

22.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

8 08/09/25

23.0

D3401041

Tow Cap Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Tow Cap Assembly

Pick:

Qty

Part Number

Description

Batch



1

D3401-041

Tow Cap

Part is not on D3391-023
S. blatz

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
08/09/25	19.0	ALS41032-130 Qty: 20 Inserts.	FL	08/09/25				
08/09/25	20.0	Remove inserts ALS41032-225 Qty: 10	FL	08/09/25				

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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Drawing Name: MID TUBE ASSEMBLY

Job Number: 41748

Part Number: D3391023

Job Number:



Seq. #:	Machine Or Operation:	Description :
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24.0	D356413	Wearshoe
------	---------	----------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)
WEARSHOE

25.0	D356613	Gasket
------	---------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)
GASKET

26.0	D36721	Phenolic Washer
------	--------	-----------------



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
PHENOLIC WASHER

27.0	AN3C4A	BOLT
------	--------	------



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)

Bolt

Pick:

Qty	Part Number	Description	Batch
4	AN3C4A	Bolt	

28.0	AN960C10L	washer
------	-----------	--------



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)
washer

29.0	HAND FINISHING1	HAND FINISHING RESOURCE #1
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Comment: SMALL & MEDIUM FAB RESOURCE 1
Install tow Cap as per Dwg D3391
Identify as D3391-021

30.0	QC5	INSPECT WORK TO CURRENT STEP
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Comment: INSPECT WORK TO CURRENT STEP
Inspect thread of each insert using DT8821

Part not on D3391-023
9/16/08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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Drawing Name: MID TUBE ASSEMBLY

Job Number: 41748

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description :

31.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: *PPP 41691*

PCSP/29 C

32.0

QC21

FINAL INSPECTION/W/O RELEASE



08/09/30

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 08-09-30

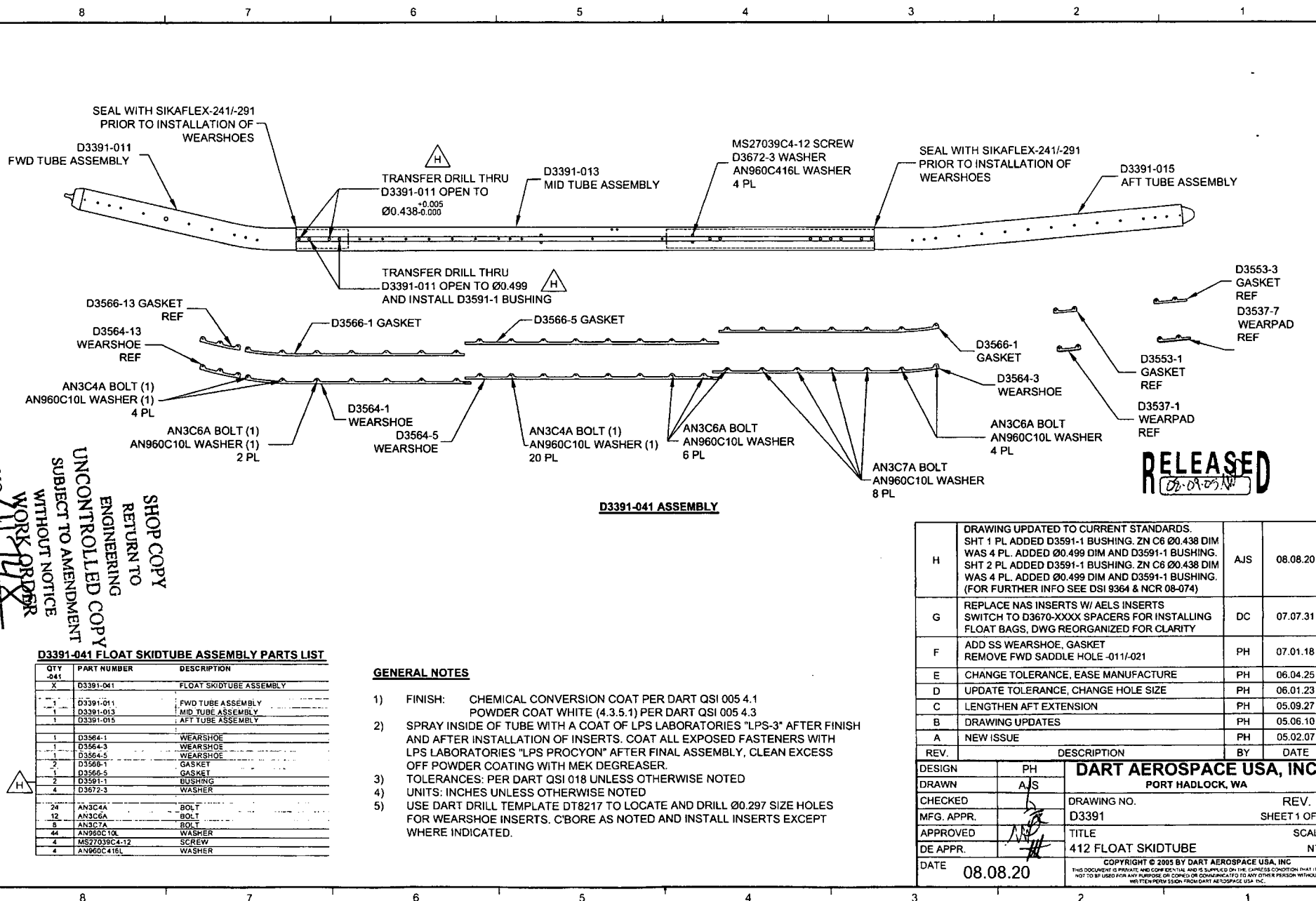
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



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D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

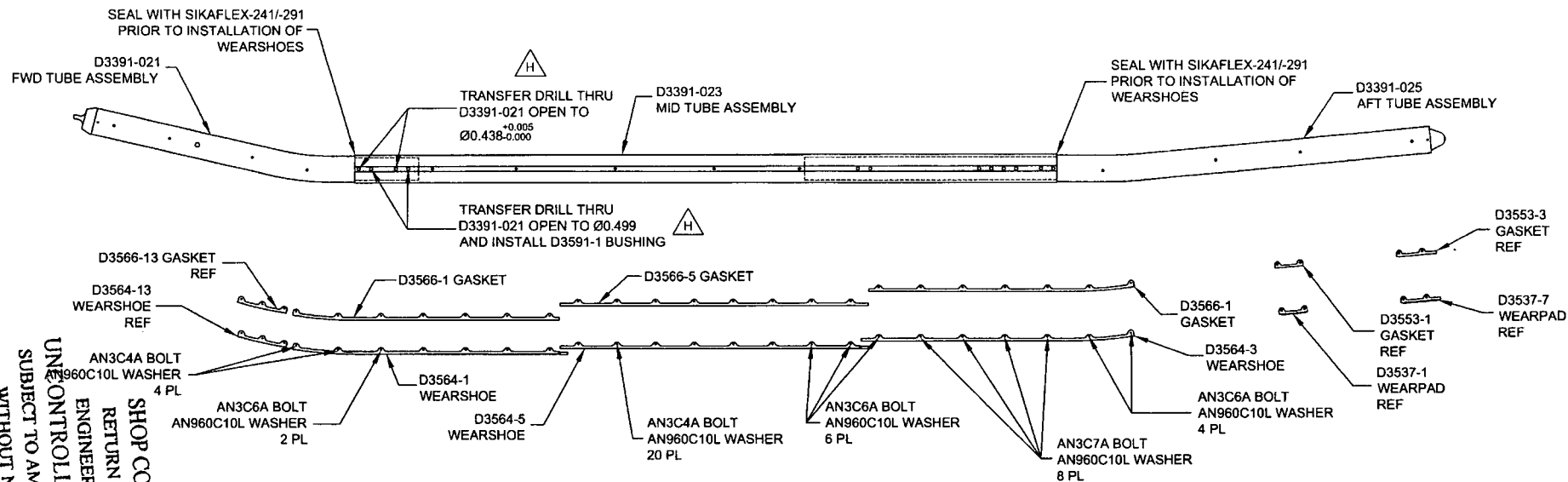
QTY	PART NUMBER	DESCRIPTION
1	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-5	WEARSHOE
1	D3564-13	WEARSHOE
1	D3566-1	GASKET
1	D3566-5	GASKET
1	D3566-13	GASKET
1	D3591-1	BUSHING
1	D3672-3	WASHER
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH
AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH
LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS
OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES
FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT
WHERE INDICATED.

H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 1 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

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D3391-043 ASSEMBLY

D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

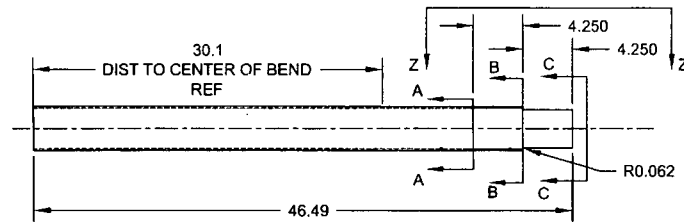
QTY	PART NUMBER	DESCRIPTION
1	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-3	WEARSHOE
1	D3564-5	WEARSHOE
2	D3566-1	GASKET
2	D3566-5	GASKET
2	D3566-13	BUSHING
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER

GENERAL NOTES

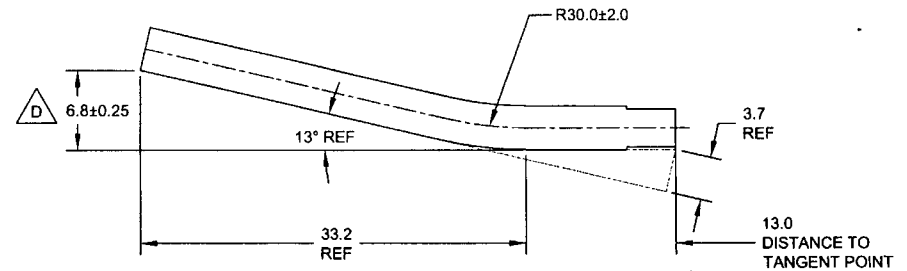
- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
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- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES
FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT
WHERE INDICATED.

RELEASED
08-09-2017

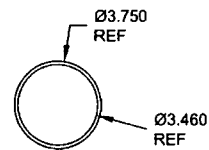
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DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 2 OF 8
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DE APPR.		412 FLOAT SKIDTUBE	NTS
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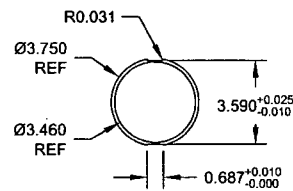
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



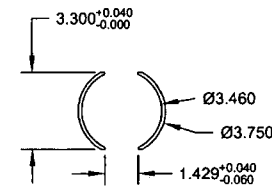
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



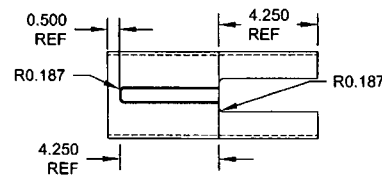
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X

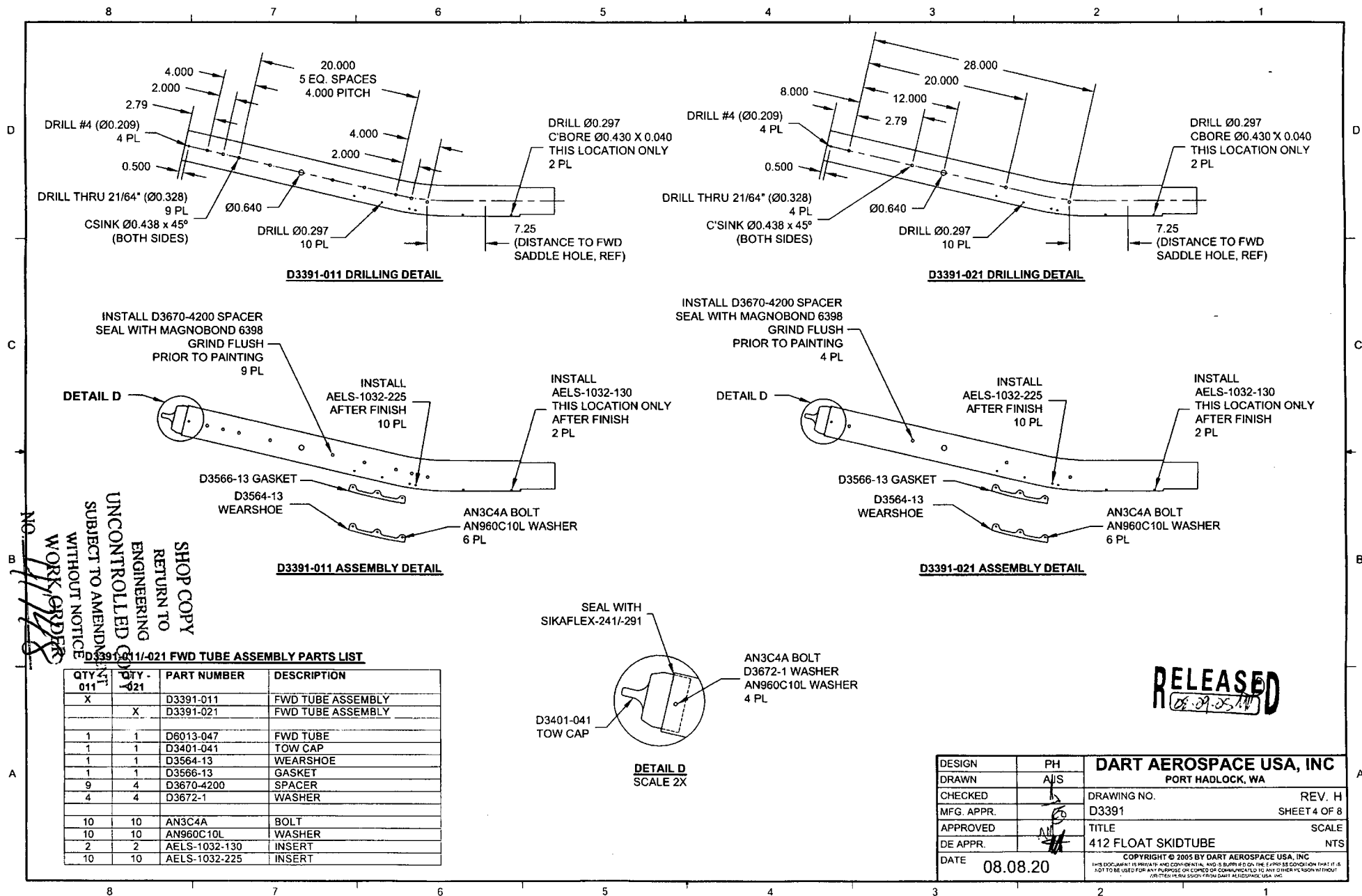


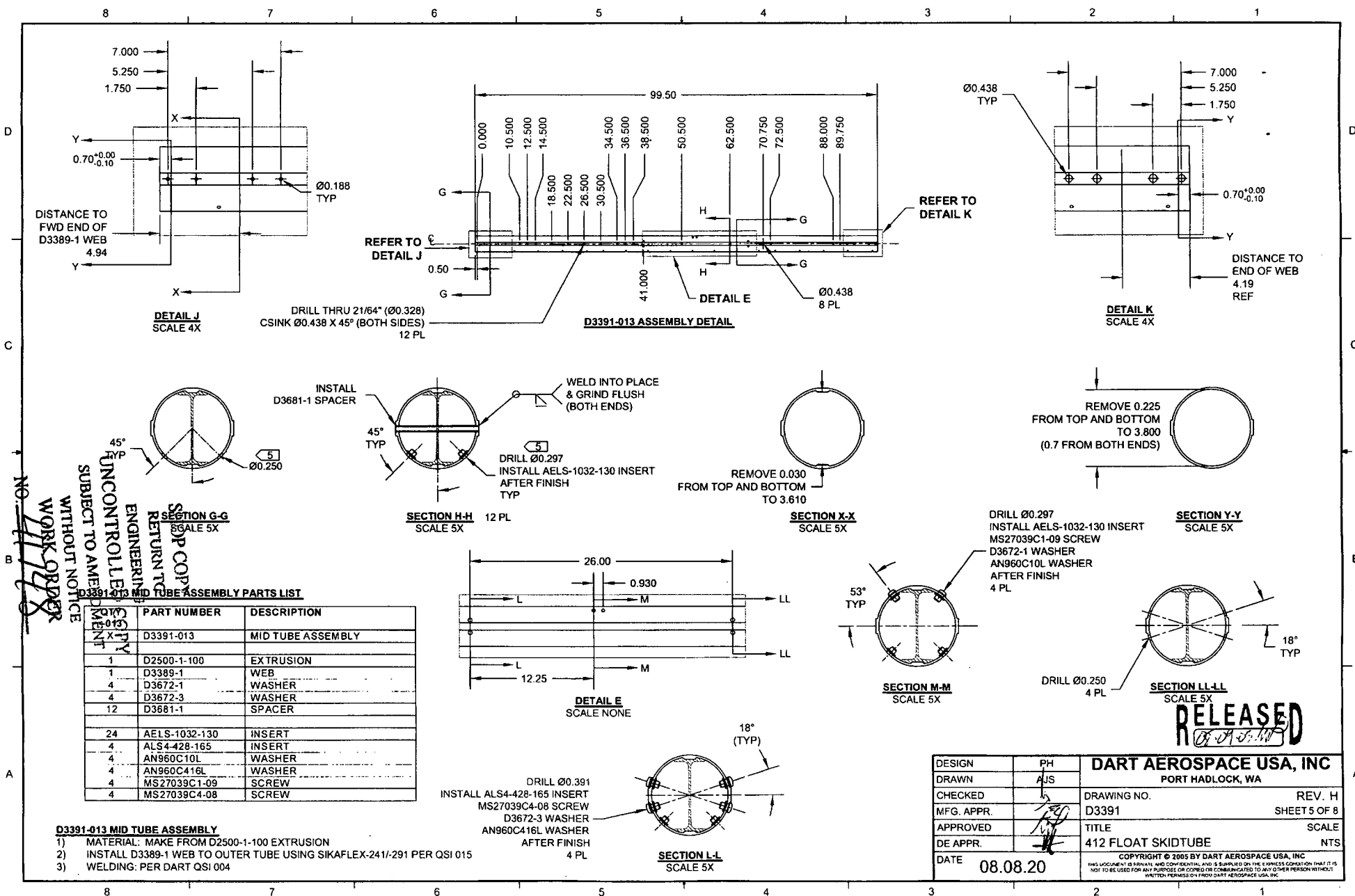
VIEW Z-Z
SCALE 2X

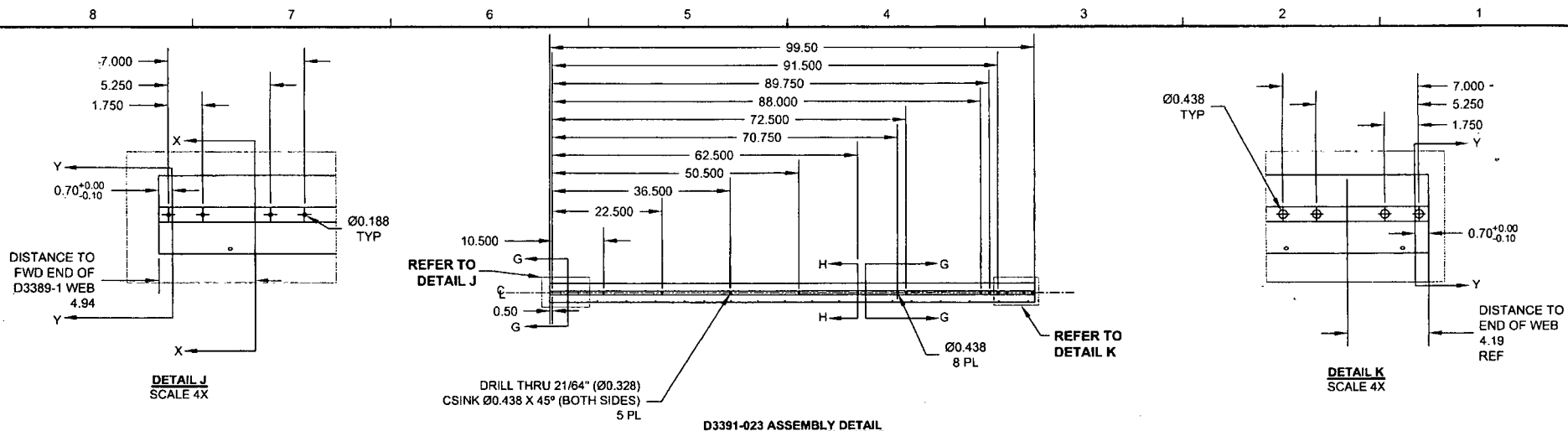
RELEASED
08-05-11

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AUS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 3 OF 8
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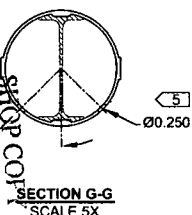




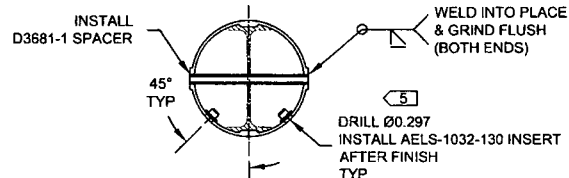
DETAIL J
SCALE 4X

DETAIL K
SCALE 4X

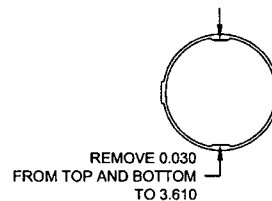
D3391-023 ASSEMBLY DETAIL



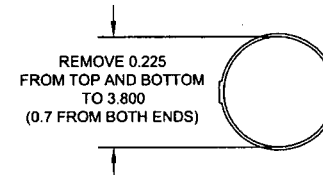
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X



SECTION X-X
SCALE 5X



SECTION Y-Y
SCALE 5X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
1	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

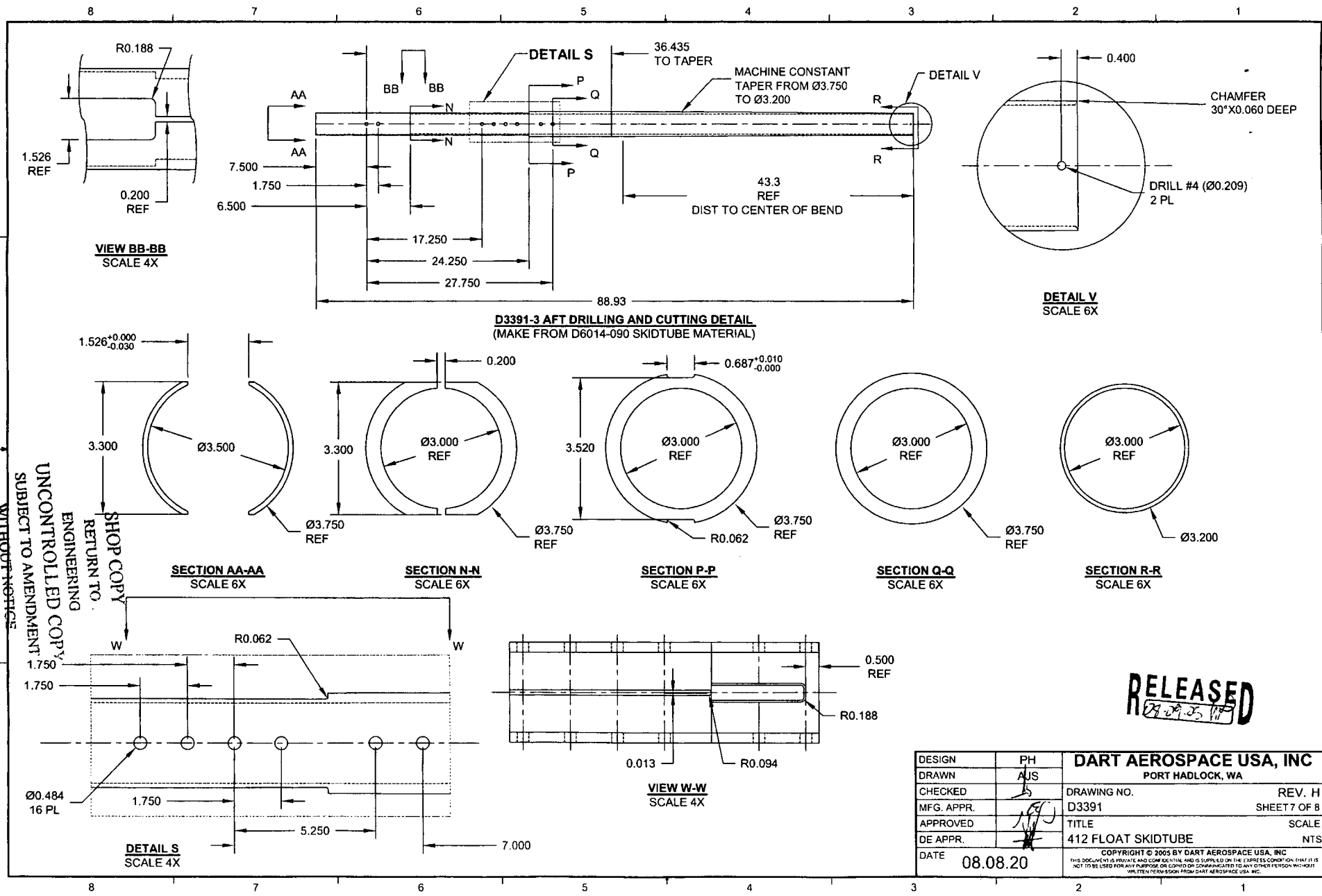
- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 6 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. IT IS SUPPLIED BY THE ISSUING AGENCY UNDER THE CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

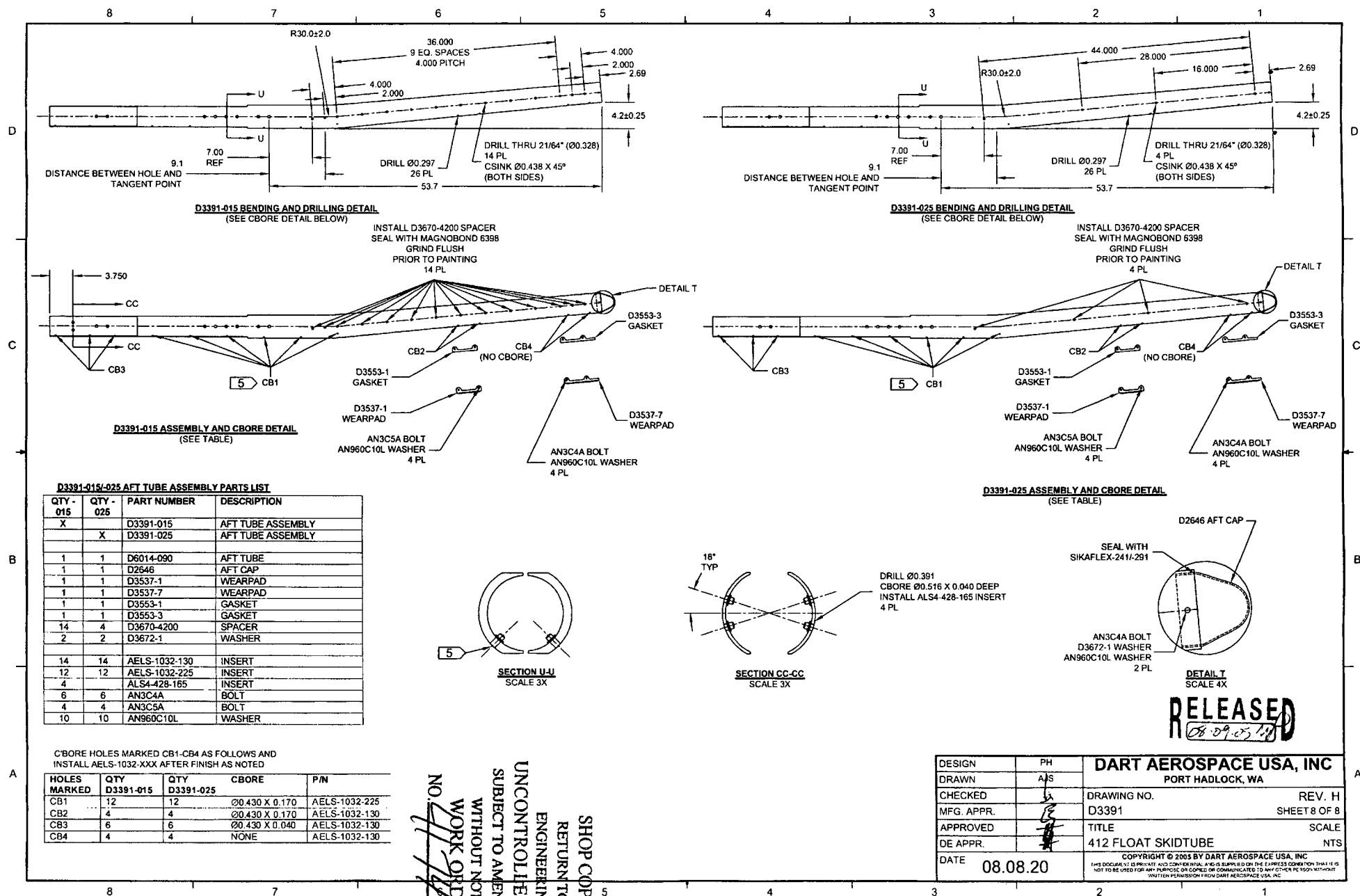
NO. 4728
WORK ORDER
SUBJECT TO AMENDMENT
WITHOUT NOTICE

RELEASED
08-05-14

NO. 4178
WORK ORDER
WITHOUT NOTICE
UNCONTROLLED COPY
ENGINEERING
SUBJECT TO AMENDMENT
RETURN TO



DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 7 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
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NO. 174

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 41748
Part number: D339 1023
Description: Mid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual:

pass[☒] fail[]

Penetration:

pass[☒] fail[]

UNACCEPTABLE

Cracks:

pass[☒] fail[]

Undercut:

pass[☒] fail[]

Pin holes:

pass[☒] fail[]

Overlap (cold lap)

pass[☒] fail[]

Porosity (surface):

pass[☒] fail[]

Coloration:

pass[☒] fail[]

Qualifier Det. Dural. Date of Test Coupon 080924

Welder Barclay Elliott Date of Test Coupon 08-09-24

The above named individual is qualified in accordance with AWS D17.1.2001 to weld